

Notice of Allowability

Application No.

10/064,412

Applicant(s)

WU, TSE-HONG

Examiner

Dipakkumar Gandhi

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/31/2005.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____



GUY LAMARRE
PRIMARY EXAMINER

Allowable Subject Matter

1. Claims 1-15 are allowed.
2. Applicant's amendment filed on 8/31/2005 (including amended claims) has been entered.
3. The following is an examiner's statement of reasons for allowance:

The present invention pertains to read/write methods for CD-MRW (Mount Rainier ReWrite), and more particularly, to read/write methods which split a read-block or write-packet range into several sub-ranges to reduce the size of DRAM buffer required for the read/write procedures of CD-MRW.

The claimed invention (claim 1 as representative) recites features such as: "... (a) obtaining data to be written to a CD-MRW substrate; (b) determining a write packet range of the data; (c) after completing step (b), identifying any defect blocks in the write packet range; (d) after completing step (c), identifying breakpoints in the write packet range based on the defect blocks; (e) after completing step (d), splitting the write packet range into at least two sub-ranges based on the breakpoints; and (f) after completing step (e), individually writing each sub-range."

The prior art of record (Park US 6,493,301 B1) teaches that FIG. 1 shows a defect management area (DMA) in a lead-in area and a lead-out area of the optical disc to manage a defect area. The user area is where data is actually written and the spare area is used when a defect occurs in the user area. As shown in FIG. 2A, if defective sectors m and n, corresponding to sectors in the user area, are recorded in the PDL, such defective sectors are skipped to the next available good sector. By replacing the defective sectors by subsequent good sectors, data is written to a normal sector (fig. 1, 2A, col. 1, lines 36-38, lines 39-41, col. 2, lines 5-10, Park).

Satoh (US 6,021,101) teaches that a defective sector, which is detected during a process of conducting a recording on the first or second track is alternated in the spare are 141 or 142 of the track (fig. 15A, 15B, col. 16, lines 41-44, Satoh).

Neither Park nor Satoh teaches or suggests pre-determination or pre-calculation of sub-ranges. The prior arts of record do not teach identifying any defect blocks in the write packet range; identifying breakpoints in the write packet range based on the defect blocks; splitting the write packet range into at least two sub-ranges based on the breakpoints.

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Hence the prior arts of record do not anticipate nor render obvious the claimed inventions. Thus, claim 1 is allowable over the prior arts of record. Claims 2-11 are allowed because of the combination of additional limitations and the limitations listed above.

- Claim 12 recites features such as: "...a reading method for CD-MRW comprising: (a) determining a read block range of the data; (b) after completing step (a), identifying any defect blocks in the read block range; (c) after completing step (b), identifying breakpoints in the read block range based on the defect blocks; (d) after completing step (c), splitting the read block range into at least two sub-ranges based on the breakpoints; and (e) after completing step (d), individually reading each sub-range."

The prior art of record (Park US 6,493,301 B1) teaches that the linear replacement algorithm is utilized when a defective block is recorded in the SDL or when a defective block is found during playback, As shown in FIG. 2B, if defective blocks m and n, corresponding to blocks in either the user or spare area are recorded on the SDL, such defective blocks are replaced by normal blocks in the spare area and the data to be recorded in the defective block are recorded in an assigned spare area (col. 2, lines 16-23, Park).

Satoh (US 6,021,101) teaches that in the recording planes 1100 and 1101, the data record areas 138 and 139 can be secured so as to have the same capacity. In a system using the optical disk, therefore, the system design can be simplified. Since the recording planes 1100 and 1101 are subjected independently to the defect process, the structure of data to be written into the data record areas 138 and 139 can easily be managed while being divided into plural volumes (fig. 16A, 16B, col. 17, lines 10-17, Satoh).

Neither Park nor Satoh teaches or suggests dividing the read block range into at least two sub-ranges based on the breakpoints. The prior arts of record do not teach identifying breakpoints in the read block range based on the defect blocks; splitting the read block range into at least two sub-ranges based on the breakpoints; and individually reading each sub-range.

Hence the prior arts of record do not anticipate nor render obvious the claimed inventions. Thus, claim 12 is allowable over the prior arts of record. Claims 13-15 are allowed because of the combination of additional limitations and the limitations listed above.

- Thus, claims 1-15 are allowable over the prior arts of record.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dipakkumar Gandhi whose telephone number is 571-272-3822. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dipakkumar Gandhi
Patent Examiner



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